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18 January 1982

Worldwide Report

ENVIRONMENTAL QUALITY

No. 334

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FEDERAL, STATE GOVERNMENTS AT ODDS OVER REEF DRILLING

Compromise Plan

Brisbane THE COURIER-MAIL in English 28 Oct 81 p 1

[Article by Wallace Brown]

[Text]

CANBERRA. — A key federal parliamentary committee yesterday pointed to a compromise course between the federal and Queensland governments on the Great Barrier Reef.

It suggested a five-kilometre off-shore strip along the mainland in which mining would be allowed.

The House of Representatives standing committee on environment and conservation, chaired by the Acting Government Whip, Mr J. Hodges (Lib., Qld), made this recommendation in a majority report tabled in Parliament yesterday.

Three Labor members headed by the Opposition spokesman on the environment, Mr Stewart West, said the recommendation was "absurd."

The government will closely examine the committee's majority recommendations soon.

The committee suggested the whole Barrier Reef region be immediately declared a marine park, as provided in the Act of 1975, but with the exclusion of a five-kilometre off-shore strip extending from the low water mark along most of the Queensland mainland except where there were good reasons to extend the park to the coast.

"Reasonable" mining operations such as sand-mining and gravel-min-

ing would be allowed within this strip.

But no oil drilling or other activity likely to damage the reef would be allowed.

Mr Hodges said: "We considered the desirability of the whole area being declared immediately. But the majority

of the committee believes that a prohibition of mining activities such as the extraction of gravel deposits along 80 percent of the eastern Queensland coast would be unreasonable and not justified.

"Many of these activities would have little or no effect on the reef. While the committee believes that it would be unreasonable to declare the whole region as a marine park, there will be many areas within the region where it is essential for the park to extend to low water mark.

"Under no circumstances should the Commonwealth Government enter into any agreement with the Queensland Government which would preclude such areas being declared," he said.

Federal officials said last night the recommendation would "accommodate" the desire of the Queensland Premier, Mr Bjelke-Petersen, to have a uranium enrichment plant established on the coast.

Mr Hodges said outside Parliament he felt such a plant would not be a major problem if it was sited on the coast south from Cairns.

Queensland Rejection

Sydney THE SYDNEY MORNING HERALD in English 3 Nov 81 p 1

[Text]

The Queensland Government yesterday declared its opposition to the Federal Government's plans for extending the Great Barrier Reef Marine Park.

The plans were given to the recent meeting of the World Heritage Committee in Sydney by the Prime Minister, Mr Fraser, who said the Federal Government was "actively seeking a co-operative approach with the Queensland Government" in extending the park.

"The question is not whether, but when," Mr Fraser said.

Mr Fraser, in his electoral address on Sunday, made clear his Government regarded progress on conservation issues such as the Great Barrier Reef National Park as a measure of his Government's achievements.

Asked in Brisbane yesterday when the extended park would be declared, the Queensland Premier, Mr Bjelke-Petersen said: "As soon as they agree to what we want."

Protracted negotiations over six years between the Federal and

Queensland Governments have resulted in only 2.4 per cent of the reef being included in the park. (See Joe Glascock's report — **The Reef, It's Joh versus the world** — Page 7).

Mr Bjelke-Petersen described his Government's opposition to the most wide-reaching option being considered by the Federal Government for extending the park — extension to the low watermark of the mainland coastline.

The Queensland and Federal Governments have agreed to Lizard Island and Dunk Island as the northern and southern boundaries.

However, the Queensland Government wants the western boundary to end five kilometers off the coastline.

Mr Bjelke-Petersen said Queensland wanted access to its coastal waters.

"We want to retain some freedom along the coastline," he said.

Asked if this was for mining, if there are mineral sands washed in or along the shore, then we can't then be blocked."

Asked about oil-drilling near the Reef, Mr Bjelke-Petersen said: "We haven't even thought about that and I don't know if

that would ever come into account so close to the shore."

Mr Bjelke-Petersen suggested that Mr Fraser may also accept the five-kilometre boundary.

"While I was at Katherine last week one of the Prime Minister's staff told me they would agree to the five kilometre offshore boundary," the Premier said.

The Queensland Cabinet has instructed the Minister for Primary Industry, Mr Ahearn, to prepare a chart showing the proposed marine park area and its relation to the Queensland coast line.

The chart would show the low-water mark, the five kilometre, and five-mile offshore line and the coastal shipping lane.

Mr Bjelke-Petersen said the matter would be reviewed again next week.

Miss Diane Tarte, project officer for the Australian Littoral Society, said last night the Federal Government should use its powers and override the Queensland Government.

"Joh has been stalemating and trying to wriggle out of further marine park declarations since Capricornia was proclaimed in 1979," she said.

Editorial Comment

Brisbane THE COURIER-MAIL in English 28 Oct 81 p 4

[Editorial: "End This Reef Squabble"]

[Text]

THE Great Barrier Reef on Monday was accepted for world heritage listing and it is now up to the Queensland and Federal Governments to end their dispute over the Reef Marine Park.

The World Heritage Committee of UNESCO, meeting in Sydney, accepted the listing only after the Australian delegation satisfied the committee that Australia could protect and retain the integrity of the Barrier Reef and two other heritage sites.

The committee resolved that the Australian Government should declare all reef areas marine park as soon as possible.

The trouble here is that the Queensland Government has supported oil exploration and drilling within the Reef region. This has delayed declaration of further areas of Reef National Park.

The Great Barrier Reef is one of the world's natural wonders and most people believe it should be left in its pristine state.

Oil rigs in the area would certainly detract from its beauty and if oil was found there would be no guarantee that oil spills could be avoided.

Certainly there must be a balance between development and conservation, but in this there must be provision for special cases.

The Federal Government's aim is to encompass the whole area as a marine park. Prime Minister Fraser told the committee that the question is not whether, but when.

Now a Federal parliamentary committee has suggested a compromise which might satisfy both Federal and State Governments.

Mr Fraser and the Premier, Mr Bjelke-Petersen, should get together, using the suggestion as the basis for an agreement which will satisfy all parties.

But preservation of the Reef must be paramount.

CSO: 5000/7512

URANIUM MINING RAISES ENVIRONMENTAL IMPACT CONCERNS

Criticism of Northern Territory

Melbourne THE AGE in English 30 Oct 81 p 3

[Text]

CANBERRA — The Northern Territory Government has come under attack from a Federal Government officer for tardy and inadequate reports on the environmental effects of uranium mining.

The Government's supervising scientist for the Alligator Rivers region, Mr R. M. Fry, wrote in his annual report: "The Northern Territory authorities have been tardy in providing six-monthly reports to the co-ordinating committee and their content is inadequate to provide the material on which the supervising scientist could base a report upon the effectiveness of the Northern Territory's regular programme.

"A major shortcoming of their reports is the lack of a clear definition of the authorities' own monitoring and inspection programs designed to ensure the validity of the companies' own monitoring programmes and compliance by the companies with Northern Territory law."

The Alligator Rivers region includes the Nabarlek, Ranger and Jabiluka uranium projects.

The report was also critical of the performance of Queensland Mines Ltd which, is mining uranium at Nabarlek. The report concluded that there was "inadequate housekeeping and control of surface contamination."

Mary Kathleen Problems

Brisbane THE COURIER MAIL in English 30 Oct 81 p 3

[Article by Peter Morley]

[Text] Federal Parliament has been told of "operational problems," including seepage from settling ponds and security at the Mary Kathleen uranium mine.

But these difficulties and the free ranging of cattle over tailing pond areas have been or are being rectified.

The problems were detailed in the Uranium Advisory Council's annual report, which included a letter to the Trade and Resources Minister, Mr Anthony, written on August 19 last year.

The letter was sent by the council chairman, Sir Laurence McIntyre, whose report was tabled in the House of Representatives two weeks ago.

In the letter, Sir Laurence said his council visited Mary Kathleen and was concerned at the scope of monitoring being undertaken at the mine.

The health monitoring standards met the relevant requirements, although stricter monitoring standards applied at uranium mines in the Northern Territory.

The council believed that Mary Kathleen Uranium Ltd should adopt the same higher standards.

The letter continued: "Council noted the existence of what may be termed operational problems at Mary Kathleen.

"These include some seepage from settling ponds and water storage areas and run-off from roadways and other areas which use mine water to control dust.

"Council also noted that cattle seem to wander freely over the tailing pond areas due to inadequate fencing, and that the lock-up security in the yellowcake storage area could be improved.

"Some of these matters are problems related to the age of the Mary Kathleen operation and the

different environmental standards in existence at the time the mine was developed.

"It was evident that the company is concerned about and is endeavoring to contain the seepage problems.

"Council considers, however, that the other operational problems noted could and should be rectified."

Last night the state Opposition environment spokesman, Mr Mackenroth, said the Mines Department should take urgent action to investigate the council's claims.

If the company had not acted already to overcome the problems, it should be forced to do so and also to apply the higher health monitoring standards.

He was concerned that contaminated water from the settling ponds could be seeping into the artesian water system.

But a Mary Kathleen spokesman said there had been major changes at the mine since the letter was written and the company was working closely with the State Government and its Water Quality Council.

Surface and ground waters were being monitored for radioactivity levels.

According to the Water Quality Council, the seepage problem had been overcome by building another dam downstream from the ponds. This dammed water was pumped back to the ponds.

The matter was relatively unimportant and insignificant and there had been no adverse reports, it said.

CSO: 5000/7512

AUSTRALIA

BRIEFS

SYDNEY RIVER CLEANUP--The Sydney Water Board is considering a \$24 million scheme to help reduce pollution in the Georges River. Its upper reaches near Liverpool have become polluted with sewage and clogged with weeds. Glenfield sewage works, which treat the sewage of Campbelltown and upper river areas, empties effluent into the upper river and the Government regards the project as urgent. The Minister for Energy and Water Resources, Mr Landa, said the population of the Georges River Basin was estimated at 630,000 in June, 1979, and was expected to grow to more than 870,000 by 2001. The most rapid growth was taking place in the suburbs between Liverpool and Campbelltown. Pollution which is particularly bad after heavy rain, has been of serious concern for oyster growers and swimmers for many years. The board has produced an environmental impact statement recommending transfer of effluent by pipeline from the Glenfield treatment works upstream of Liverpool Weir to the Liverpool treatment works. Then, in a second stage, the sewage would be piped to the North Georges River main sewer leading to the Malabar ocean outfall. The total cost of the main, about 15km long, would be about 24 million. Mr Landa said the scheme had been adopted in principle by the Water Board. [Text] [Sydney THE SYDNEY MORNING HERALD in English 4 Nov 81 p 2]

CSO: 5000/7512

DAMAGING EFFECTS OF AIR POLLUTION DEPLORED

Calcutta THE STATESMAN in English 7 Dec 81 p 15

[Article by Mukul Guha]

[Text]

ENVIRONMENTAL pollution is the result of rapid industrialization and technological progress. During the past decade, it has become the bane of mankind, corrosion is just one of the many aspects of pollution. It is a complex phenomenon and does not follow any set pattern. In 1824, Michael Faraday did the ground work for defining corrosion. And William Rodney in 1903 added further to the foundation on which modern theories regarding corrosion are built.

Environmental toxicology is concerned with the harmful effects of substances with which man comes into contact in his environment or through ingestion.

Every year more than 3,000 different types of chemicals and 500,000 types of pollutants are developed in the world. Thousands of which enter into the ecological system. The carcinogenic potential of old and new industrial chemicals at a place of work is one of the most serious problems faced by preventive toxicology.

There are indicators to say that 90% of human cancer is due to environmental causes and can be prevented if man desires to forego the amenities of today. Dr S. S. Epstein, head of the Department of Occupational and Environmental Medicine at the University of Illinois, estimated that at least 10% of reported cancer deaths are due to occupational exposure. Workers in an industrial society are subjected to a complex array of environmental insults.

In the USA alone, exposure to physical agents and chemical substances in occupational environments results in 100,000 deaths a year because of diseases, more than 14,000 because of accidents and over 4,000,000 cases of injury.

Recently, the National Environmental Engineering Research Institute submitted a report which says that 60% of Calcutta's resi-

dents suffer from respiratory diseases because of air pollution and non-smoker in the city here in Calcutta virtually smokes 20 cigarettes a day.

Environmental pollution leads to corrosion of metal, cracking of rubber, soiling of building surfaces, deterioration of works of art.

In developed nations there are systems for assessing such damage. The USA has estimated a loss of billions of dollars every year. A study by French experts indicates that pollution costs the USA between 3.4% and 4.2% of the GNP. In Canada, Italy and Britain and northern Ireland it is between 3% and 5% of the GNP. In India, unfortunately, there is no way of knowing the indirect or even the direct loss because of corrosion. Rough estimates say it is between 2% and 5% of the GNP, which in terms of money lost is well over Rs 1,300 crores a year. In West Bengal corrosion causes a loss of over Rs 35 crores a year. All these estimates are for the industrial sector only.

The atmospheric deterioration of ferrous metal takes place by way of the electro-mechanical process. Numerous small electro-mechanical cells form on the exposed surface of the ferrous metal. If the metal is clean and dry it is corroded. However, if there is moisture on the surface, air pollution is very likely to result in electrical conductivity and hasten the process of corrosion. But if there is no moisture on the metal, even in highly polluted environs corrosion is rare. Temperature also plays a very significant role. This is the way corrosion sets in in water pipes, oil drilling systems, scaffolding, skyscrapers and any pure metal object.

Solids suspended in the atmosphere descend to the ground as acids. Corrosion sets in unseen, as it has at the Taj Mahal (because of the Mathura refinery) and at Calcutta's Victoria Memorial (because of 2,000-odd industrial units, two thermal plants and work on the Metro Railway). Calcutta is a good

example of how urban pollution can if unchecked reach alarming levels. The predominant pollutants in Calcutta and Howrah are suspended particles like sulphur oxide and hydrogen sulphide. The dust-fall of particles in Calcutta ranges from 25 to 100 tons a sq. mile a month and 22 to 100 tons a sq. mile a month in Howrah. Among the pollutants emitted in the atmosphere in the Calcutta Metropolitan area there is 28% of carbon monoxide, 9.3% of hydrocarbons, 7.5% of oxides of nitrogen.

Pollution of India's water systems is at an alarming level. The National Environmental Engineering Research Institute says that over 70% of India's inland waters are absolutely unfit for human consumption because of indiscriminate discharging of industrial wastes. Little has been done for treating industrial or domestic wastes.

Corrosion of the mains in Calcutta's water distribution system has set in very firmly. The NEERI study of the Kalabagan, Mercus Square and Wazgunze zones showed that leakage due to corrosion has resulted in a loss of more than 20% of filtered water every day. Pollution is thus undermining developmental programmes and causing a loss of revenue.

It is, however, a good sign that people of late have become concerned about pollution. Only last month a two-day convention on corrosion was held in Bombay where Mr S. Nari Setti, director of the National Centre For Technical Development, said that the shutting down of a 50 MW plant because of corrosion (such as in boiler tubes) could result in a loss of Rs 50,000 an hour and the loss in other industries may be much higher.

At the same convention, Mr Daleep Singh, chairman and managing director of Rastriya Chemical and Fertilizers, suggested that industry should have a built-in system to analyse the effects of corrosion. Mr V. Pachayaban of Fertilizers Association of India expressed concern about the impact of corro-

sion on plants. The "corrosion map" of India prepared and developed by the National Metallurgical Laboratory in Jamshedpur is also a very significant step towards controlling corrosion.

It is a pity that the Water Act of 1974 and the Air Act of 1980 have only existed on paper. The Maharashtra Government could find only convict three factories under these Acts although over 200 factories have been prosecuted. In West Bengal, too, implementation of the Acts is still far from satisfactory.

But there are good signs such as the CECRI developing 50 anti-corrosive patents and people all over the country are getting more and more concerned about the impending environmental nightmare.

CSO: 5000/7025

SEMINAR ON FORESTRY AND ENVIRONMENT REPORTED

Calcutta THE STATESMAN in English 8 Dec 81 p 9

[Text]

BANGALORE, Dec. 7.—The establishment of a Forest and Environment Commission to make recommendations on the role, duties and responsibilities of the public "foresters" and Government departments in maintaining the ecological balance and protecting the environment was one of the resolutions adopted at the two-day national seminar on forestry and environment held here last week.

The seminar, organized by the Karnataka Forest Department, appealed to the Union and State Governments to take steps to evolve a national consensus to place above party politics, national forest and environment policy.

What prompted the seminar, attended by over 100 foresters and environmentalists from all over the country, was the Karnataka Chief Minister, Mr R. Gundu Rao's remarks as chief guest at the inaugural function that their recommendations be "in tune with political realities." The electoral requirements of the ruling party should be kept in mind while making recommendations to the Government he told the audience. The Chief Minister was candid enough to admit that Governments had to compromise on issues for political reasons and enjoined on the participants to use their expertise to make suggestions "which are acceptable to our political system". Otherwise, he warned, the resolutions would remain mere recom-

mendations.

The seminar took note of relentless local pressures on State-level decision-makers and pointed out that national and community interests demanded the preservation and protection of the remnants of the forest and natural environment for the improvement of human life.

The seminar recommended that the Central Environment Department should screen any project which may have an adverse ecological influence on wildlife habitat.

For this purpose it suggested incorporating necessary measures in the comprehensive Forest Bill contemplated by the Government. It wanted the establishment of a central agency to ensure that wildlife was preserved in different States. It recommended that if necessary legislation could be brought under the Concurrent List. The seminar wanted social forestry programmes to be taken up without delay to augment the supply of fodder, green manure and firewood which were in short supply.

It suggested that for the next 10 years forest revenue be made available for forest development work particularly social forestry schemes. The seminar wanted tribal welfare to be integrated with forest development. Stressing that tribals should not be taken away from their traditional occupations, it recommended abolition of the forest contract system in tribal areas and their employment in forest work.

CSO: 5000/7026

NATIONAL LAW TO CONTROL TOXIC WASTE DUMPING URGED

Christchurch THE PRESS in English 10 Dec 81 p 6

[Text]

National legislation should be introduced to control the dumping of toxic and hazardous wastes, according to the clean air and health committee of the Christchurch City Council.

This recommendation was one of several adopted by the committee from a report by the city health department on the disposal of toxic and hazardous wastes.

Legislation should include a definition of wastes covered by the controls, provision for the setting up of treatment or disposal sites, and charges to be levied, according to the report.

The report also said that a co-ordinating body on a metropolitan basis is required to investigate possible treatment and disposal of both solid and liquid toxic wastes.

"It is a very serious problem which if we are not careful could lead to an irreversible problem with our groundwater supply," Cr H. A. Clark said. "We must act quickly."

Cr A. J. Graham said that

unless immediate action was taken the public could be put at great peril.

The report said that there was increasing difficulty in obtaining disposal sites for controlled burning of some toxic or hazardous wastes and for the dumping of other problem materials.

"No facilities exist specifically for the disposal or treatment of difficult toxic or hazardous wastes," the report said.

The committee's acting chairman, Cr C. E. Manning, said this was the most important document to come before the committee.

"Although we have a problem, Christchurch is in advance of other centres, as we have information on the size and source of wastes. However, it is important we get on with discussions now," he said.

Copies of the report will be forwarded to other interested parties and the chairman and deputy chairman have been authorised to start discussions on the basis of the recommendations contained in the report.

REVISED PROCEDURES FOR ENVIRONMENTAL PROTECTION RELEASED

Auditing Role Preserved

Wellington THE EVENING POST in English 24 Nov 81 p 10

[Text] Revised procedures for environmental protection released today stop the Commissioner for the Environment from considering the economic implications of development projects.

Releasing the new procedures, the Minister for the Environment, Dr Ian Shearer, said he was doing so to allay public fears.

The procedures, a revision of those issued by the Commission for the Environment in 1973, govern the drawing up of environmental impact reports for major development projects.

Dr Shearer said that there were public fears that secret Government directives existed aimed at limiting the scope of the commission's audits of such projects.

However, he said, the revision had kept intact the auditing role of the commission.

"Most importantly the new procedures will continue to allow the Commissioner for the Environment full scope to deal with the essential physical, biological and community impacts of proposed projects," he said.

Dr. Shearer said that the Government had decided to carry out the revision because of legislative changes affecting the role of the commission since the procedures were first drafted.

Change

These included the revised Town and Country Planning Act 1977 and the National Development Act 1979 and its subsequent amendment this year.

In comparing the original procedures with the revised ones, the major change seems to come under the heading "Environmental Impact Audit."

A new clause under this heading sets out what the function of such an audit is, saying that in general it will note and verify the information in the environmental

impact report and where necessary provide additional information and make any comments as are appropriate.

"The commissioner will not concern himself with the economic implications of the proposal including those relating to alternative resource use," the clause, in part, reads.

"Comments received in public submissions on aspects of the proposal which relate to policy questions will be referred to the appropriate government departments or local bodies."

The original procedures, under the same heading, stated that the commission was "to take into account any representations made by the public either by individuals or by organisations."

Advice

Commenting on this aspect of the revised procedures, Dr Shearer said that while Government assessed the economic and technical aspects of a project proposal, it would seek advice on the environmental consequences of the proposal.

"Government has accordingly endorsed the role of the commission as co-ordinator of this advice," he said.

Auckland 'HERALD' Comment

Auckland THE NEW ZEALAND HERALD in English 25 Nov 81 p 6

[Editorial: "Checks on Commission"]

[Text]

Proposals for altering the guidelines whereby the Commission for the Environment assesses the environmental impact of industrial developments have been in the wind for at least a year. Inevitably, the prospect of changes raised fears that the Government had tried to devise ways of stifling criticism of its national development strategies.

Now the proposals have surfaced as a revised set of procedures for environmental protection and enhancement published by the Minister for the Environment, Dr Shearer. They redefine the responsibilities of developers and the commission. No doubt they will be criticised; yet they will do much to allay suspicion of Government motives.

By the new procedures, and on Dr Shearer's own assurance,

the auditing role of the commission will remain intact. It will retain full scope to deal with the essential physical, biological and community impacts of proposed development projects, but it will not be able to comment on the economic implications of a proposal, including those relating to the use of alternative resources.

The Commissioner for the Environment, Mr Piddington, who much earlier had seemed dubious about the possible effects of proposed changes, now accepts that the revised procedures dispel most of the uncertainties surrounding the commission's role. "The fact that the commission must act independently in arriving at a judgment," he says, "has been reaffirmed." He also concedes it is helpful that the procedures preclude the commission's assessing

economic implications.

It was growing Government dissatisfaction with the expanding role of the commission, and in particular its intrusion into economic and policy fields, that prompted the re-evaluation of its responsibilities. Such a course was reasonable.

Even though there may now be some reluctance to see the commission relegated from a kind of self-appointed watchdog over the whole house to an official watchdog over one door, it is the duty of other agencies, groups and individuals to assess economic and political ramifications and alternative ideas; and make them public if need be. To load that burden on the commission is not merely to divert it away from its primary purpose, but also to cultivate endless contention and delay.

Besides, Dr Shearer is a long-time champion of the environment, and he has never hesitated to speak out when a principle has been in danger of being compromised. Far from resisting the changes, he endorses them, a strong recommendation, surely, for a good many environmentalists.

CSO: 5000/9053

POLITICAL PARTIES' POLICIES ON ENVIRONMENT SUMMARIZED

Auckland THE NEW ZEALAND HERALD in English 26 Nov 81 p 24

[Text]

NATIONAL

- Preserve areas of scenic, ecological and scientific importance.
- Protect wild and scenic rivers.
- Encourage greater public participation in environmental planning.
- Protect the urban environment through urban renewal and land re-development.
- Protect wildlife through the wildlife service and a committee for wildlife research.
- Investigate methods of protecting inland water and seek public support for more coastline conservation.
- Help protect Antarctic marine life.

LABOUR

- Ensure the independence of the Commission for the Environment and the Environmental Council.
- Review the organisation of Government departments for a better arrangement of responsibility for the environment.
- Review all environmental and planning legislation impinging on land development, and repeal the National Development Act.
- Establish recycling and conservation programmes and make them attractive to industry and commerce with tax reforms, loans and grants.
- Reform legislation to protect inland waterways and establish a scheme to protect coastline, coastal waters and the seabed.
- Limit urban spread on to productive agricultural land and support town belt planning.
- Legislation to control noise and moves to combat air pollution.
- No nuclear power stations or visits by nuclear-powered ships.
- Protect animals and plants with measures including banning the sale of products from endangered species and reviewing legislation on experiments with animals.
- Review all mining legislation with public participation, require a bond from mining companies and ban large-scale, open-cast mining on the Coromandel Peninsula.

SOCIAL CREDIT

- Expand the Commission for the Environment into a ministry of natural resources and environment and establish a national nature conservancy to set the objectives of the ministry.
- Establish a conservation code—a body of environmental law controlling all private and Government development.
- Wide-ranging environmental research by the nature conservancy.
- Environmental zoning to protect life, native forests, scenic and recreational land against commercial interests.
- Amend legislation so the final authority for soil and water conservation, land use, control of waterways and conservation of land and marine life rests with the ministry of natural resources and environment.
- Ban the sale of crown or public land to overseas interests and control the acquisition of any land by foreign companies.
- Improve the urban environment with measures including establishing small suburban communities, greenways and smokeless zones, tighter control of litter and banning large roadside hoardings.
- Control mining and use of minerals through a Government-funded mining corporation, with no mining rights let to foreign countries unless in the proven interest of New Zealand.
- Establish a court to hear mining and prospecting applications and ensure minimum damage to the environment.

MORE OBJECTIONS RAISED TO MINERAL EXPLORATION LICENSES

Lakes District Opposition

Auckland THE NEW ZEALAND HERALD in English 2 Dec 81 p 2

[Text]

A mining company looking for gold in the Rotorua area is keeping away from the Rotorua lakes district because of anticipated public opposition.

But a second overseas square kilometre block north of Taupo.

Mr Ross Beatty, a geologist with the company's consultants, P. M. Hancock and Associates, said it had evaluated the Rotorua lakes district area but was not interested.

The other two areas are at Tokoroa and Taupo. The company is Newmont Proprietary Ltd of Australia.

Newmont and Australia and New Zealand Mining Co only advertised their intention last week, to file applications for exploration licences, with the public having 21 days from then to file objections.

But Australia and New Zealand Mining Co expected opposition and decided to restrict its interest to what it sees as a less contentious 216

Lands. Mr V. S. Young, expressing its concern and asking to be kept informed of further developments.

A Rotoiti environmentalist, Mrs Pauline Davey, said there were 13 reserves, two state forests and six lakes in the area.

Although an exploration licence gave no rights to disturb the environment she was "against" the idea of anyone even considering mining in the area.

"They (Newmont) have overstepped the mark in even applying for a licence," she said.

She had already received support from the Coromandel watchdog group and other environmentalists and was mounting a campaign "to make the public aware of what is going on."

Some Objections Withdrawn

Auckland THE NEW ZEALAND HERALD in English 3 Dec 81 p 3

[Text]

Objections to applications for exploratory mining licences in Rotorua, Taupo and Kawerau by Amoco Minerals New Zealand Ltd are being with-

drawn.

This increases the likelihood that the Resources, which would give the company the right to "look but not touch," will be granted

by the Ministry of Energy.

A spokesman for the mines division, Mr R. W. Burn, declined to say how many objections there had been or why they had been

withdrawn.

Amoco applied in June for four exploratory mining licenses in areas stretching from Wairakei to Atiamuri, Broadlands to the Waikite Valley, Waikite to Tihiotonga, and Kawerau to Edgecumbe.

The Rotorua-Taupo province of Federated Farmers had considered objecting.

"We had a long discussion with the company," said the provincial secretary, Mr R. K. Gray. "We told them what our feelings were and they made it clear they only wanted to explore the territory at this stage."

Meanwhile, a Rotoiti couple, Mr and Mrs C. Davey, are spearheading a campaign to stir up public

opposition to another application for exploratory licences, by Newmont Proprietary Ltd, in the Rotorua lakes region.

Mr Davey said Newmont specialised in open-cast mining.

Objections to the Newmont proposals must reach Wellington by December 15.

CSO: 5000/9053

PROPOSED BILL SEEN NOT PROTECTING WILD, SCENIC RIVERS

Wellington THE EVENING POST in English 24 Nov 81 p 29

[Text]

WILD and scenic rivers will not be protected in perpetuity under the Water and Soil Conservation Amendment Bill, the Federated Mountain Clubs of New Zealand told a preliminary select committee

The bill was merely a water allocation plan under a different guise, said the federation in a submission.

The country needed a separate wild and scenic rivers protection act to do an adequate job, the federation said.

The federation's submission listed 12 specific faults they saw in the bill.

"Hydro damming annihilates the recreational and scenic attractiveness of a river for tramping, because it locks up the river by submerging it," said the submission.

"Consequently our sport has a fundamental interest in permanently protecting the best mountain rivers from damming."

A special purpose wild and scenic rivers act would provide permanent protection against damming and major water abstraction and diversion.

The federation said the bill showed that the Ministry of Works and Development's water and soil division was incapable of drafting such legislation.

The job should go to either the Lands and Survey Department or the Commission for the Environment, said the federation.

Although a special act was what was necessary the federation said it thought the

bill would proceed regardless and it felt forced to comment on its inadequacies.

No agency

The first of the 12 faults the federation found in the bill was that it did not state the intention that rivers with outstanding wild, scenic or other natural characteristics should be permanently protected.

There would also be no agency specifically charged with promoting river protection in the same way that the National Parks and Reserves Authority protects national parks and reserves.

"The bill contains no schedule of rivers to be given immediate protection in an attempt to redress the imbalance left by 40 years of development."

It can also be over-ridden by both the National Development Act and the Mines Act.

There were no guidelines in the bill for weighing the recreation and conservation interests against the development options.

Minister

Even if a conservation order for a river was granted revocation proceedings on the order can begin im-

mediately or the order can be changed piecemeal by the minister.

"There is not even anything as temporary as a 20 year moratorium," said the federation.

The federation also believes that a conservation-oriented minister such as the Minister for the Environment or Minister of Lands should be responsible for a conservation order rather than the Minister of Works.

The tribunal to advise on the issuing of orders should include adequate representation of recreational and conservationist interests or it would lose much of its value, said the federation.

That the bill allowed an application for water rights to progress while a hearing for a protection order was in progress made a mockery of the whole system, said the federation.

The process of hearings for a protection order would also be very costly for voluntary groups trying to achieve river protection, the federation said.

The onus of the bill is also still on the conservationist to protect "what is inherently his and not on the developer who will destroy these inherent values," said the federation.

BRIEFS

CAMPAIGN TO RAISE FUNDS--Auckland, Today (PA)--The Enviromental Defence Society has launched a campaign to raise \$20,000 to fight opencast mining on the Coromandel Peninsula. Money raised in the "pro-Coromandel campaign" will be used to fight more than 15 water-right and prospecting applications through appeals. [Text] [Wellington THE EVENING POST in English 24 Nov 81 p 22]

SPORTING GROUP'S CONCERN--Press Assn Wellington--The Small Game Shooters' Sporting Association strongly objects to the possible granting of mineral exploration licences in the central North Island. The association said yesterday that it was concerned areas used by their members within the districts surveyed might be made "environmentally sterile" if mining applications were granted. The areas around Tokoroa, Rotorua and Taupo where mining companies wanted to explore included many scenic reserves, tourist attractions and forest and wildlife habitats, the association said. [Text] [Auckland THE NEW ZEALAND HERALD in English 3 Dec 81 p 8]

CSO: 5000/9053

ENVIRONMENTAL DECAY DESTROYING RICE TERRACES

Manila PHILIPPINES DAILY EXPRESS in English 14 Dec 81 p 21

[Article by Joel Palacios]

[Text]

CENTURIES-old rice terraces, carved by primitive tribes from the face of the steep mountain slopes of the northern Philippines, are slowly being destroyed by environmental decay.

The wide terraces, described locally as the eighth wonder of the world, have been losing much of their watershed areas through indiscriminate logging and are endangered by soil erosion and excessive rainwater run-offs.

Erosion has eaten up portions of the surface of the terraces, leaving the landscape flat, while water has become a danger because of excessive run-offs that deprive the soil of nutrients.

The terraces run down a chain of mountains from a peak of about 5,000 feet (1,515 meters). Put end to end the fields would stretch about 14,000 miles (22,000 km).

A BILL to preserve the terraces as a national treasure and maintain them as one of the world's outstanding feats of primitive engineering has now been filed in the national assembly.

But heavy damage has already been caused and the Bureau of Forest Development says that about 2.5 million acres (one million hectares) on watersheds in the

country need immediate rehabilitation.

"It took the natives of the mountain country hundreds of years to build the rice terraces which anthropologists say date back to around 2000 B.C.," an official from the National Museum said.

Museum officials emphasized the immense manual labor required to dig the terraces from the steep hillside, build stone wall edging and fill it with layers of materials carried from the river beds or brought down from the hillsides.

Little waterfalls, part of the irrigation system, continuously play down the terrace walls. Water curves round the hillside in a narrow ditch that is dug out of solid rock.

• • •

"BUT the terraces are diminishing... as a result of excessive water run-offs and the lack of maintenance which is necessary for its upkeep," one official lamented.

He said unless the watersheds are protected and the natives are taught the principles of hydraulics, the terraces were threatened by environmental decay.

The Bureau of Forest Development said no logging permits have been granted within the province since last year.

"Actually, the natives themselves are the ones cutting down the trees which they use either for fuel or woodcarving which is fast becoming a major source of their incomes," a forestry official said.

Some portions of the terraces have been designated for reforestation and the inhabitants are being encouraged to plant trees along with cash crops like vegetables.

"As a rule, the government does not allow cutting of trees in the perimeter of watershed areas where shelter belts are established for forest reserves," the official said.

• • •

THE terraces, planted with upland rice and sweet potatoes which are the staple food of the native Igorot and Ifugao tribes, have been described as a "window to the Philippine ethnic past."

Gualberto Lumaig, who introduced the preservation bill in the national assembly, said the felling of trees in the watershed areas should be totally banned with stiff fines and imprisonment for violators.

"Educators point to the terraces as concrete proof of what Filipinos are capable of achieving together through persevering dedication and it should be declared as a national treasure," he said.

CSO: 5000/4908

HEALTH HAZARDS SAID TO CONFRONT INDUSTRIAL WORKERS

Islamabad THE MUSLIM in English 23 Nov 81 p 5

[Article by Michelle Hibler: "Occupational Ailments Rising in Thailand"]

[Text] BANGKOK, Thai workers, like a young woman I saw in a dusty bagging plant, are exposed to unhealthy working conditions.

In battery manufacture, face masks are not sufficient to prevent lead poisoning, while steel workers pouring molten ore are often without gloves, masks or eye protectors.

The drive to increased productivity in many other enterprises has resulted in high rates of illness and numerous accidents. In 1977 for instance, more than 7,000 metropolitan workers here were hospitalised for work-related injuries, a 20-fold increase since 1960.

An estimated additional 20-30 per cent of work injuries went unreported. No statistics are available on occupational diseases resulting from long-term exposure to noise, dusts and hot working places or to various toxic chemicals and physical hazards.

But in a firm boasting of better-than-average working conditions, the staff doctor of a wet-cell battery company has treated 303 respiratory complaints, 117 eye, ear, nose and throat infections, 71 gastrointestinal disorders and 32 cases of skin irritations. Six of the company's 400 workers were hospitalised for lead poisoning.

That was in January, 1981 alone. The firm has a full-time physician and a small dispensary. Accidents are few. As there are no quotas to be met, the pace is relaxed and workers can take frequent breaks in a small garden.

More than 1,000 factories are located in Samutprakarn province, just outside Bangkok, employing some 64,000 workers, 80 per cent

of whom are in textile, fabricated metal products and chemical industries.

Dr. Malinee Wongpanich, chairperson of the department of occupational health of Mahidol University's School of Public Health, says that working conditions in these factories often resemble those in Europe during the Industrial Revolution in the 1800s.

Living conditions are also inadequate. Many workers, 90 per cent of whom are migrants, live in crowded, dirty dormitories, often directly above the shop floor.

Inadequate labour legislation and an acute shortage of qualified personnel to enforce regulations have contributed to the neglect of health and safety for Thai labourers. Trained medical personnel are in short supply and modern instruments are not available. Workers themselves are also ignorant of safety precautions.

Thailand's industrial health activities are limited to pre-employment physical examinations, annual chest X-rays and curative medical care. They are administered by part-time doctors, factory nurses, or more often first aid attendants, many of whom are untrained.

While recommendations on working conditions are made by institutes like the Ministry of Health, improvements are left to the factories' discretion. Many factory managers are completely ignorant of the few safety standards set by the Government.

As the fast industrialisation of Thailand continues, conditions are expected to worsen if present trends continue.

Because scientific research in this area has been scarce, no data exists to convince policy

makers of the need for action. Thus, in 1979 Mahidol University looked into the occupational health problems of 600 textile workers in Samutprakarn province.

The findings proved the need to set up a local industrial health unit in Samutprakarn Provincial Hospital, which was then expanding its facilities. The unit will be the first of its kind in Thailand.

Following the initial study, the Department of Occupational Health launched a larger one. Headed by Dr. Malinee and supported by Canada's International Development Research Centre (IDRC), the project will also train and evaluate industrial health personnel at all levels. It will develop a model for industrial health services involving the provincial hospital, medical and labour offices, and the Occupational Health, will review occupational health conditions in several Asian countries.

Studies of working conditions, interviews, and physical examinations of workers in three representative medium-sized factories confirmed Dr. Malinee's worst suspicions.

In foundry, for example, accidents are common: strains from carrying heavy loads; burns from molten ore; eye damage from exposure to ultraviolet and infrared radiation and flying metal chips. Lung and respiratory damage results from exposure to carbon and iron oxide dust, and to toxic and irritating gases. Skin inflammation is common.

The study showed that while 69 per cent of workers have abnormal lung functions and hearing impairments, 54 per cent have visual abnormalities. A high manganese content was also found

in blood and urine samples.

Workers themselves are partly to blame. "We have spent money on safety devices" says one foundry manager, "but the workers won't wear them". More than anything, he wants to know how to motivate them toward safe working practices.

For instance, in a dark, noisy smelting section of a foundry, a number of workers are not wearing dust masks or hard hats provided. Some guide the 20-ton bucket of molten ore with wooden sticks and remove the just-poured ingots without gloves.

Because of the intense heat in one section where red-hot metal is made into wire, workers have removed their shirts, increasing the possibility of burns. The sole dust collector is out of order.

Similarly, in the wet-cell battery plant, workers grinding lead into powder are not wearing the gauze face masks provided inadequate for the job in any case. Others are mixing acid without gloves.

Shift work further endangers workers in the textile mill. Statistics have shown accidents are more frequent during the night shift when lighting is poor and supervision more lax. Health problems of textile workers include inflammation of the mouth, skin diseases and varicose veins caused by standing for long periods at the machines.

Visual abnormalities were found in 26 percent of textile workers, and hearing losses in 49 per cent, particularly those in the weaving section. The noise and dust levels were above legal limits, while lighting was below standards.

Last March, Dr. Malinee and her team revisited the factories to inform managers about the training course offered for first-aid attendants, factory and private doctors and other health workers. By testing trainees after their return to work, the impact of the courses will be evaluated. Meetings with senior management will also be held to increase their awareness of health and safety problems and solutions.

Together with resource person, representatives of different provincial and national agencies will draw up a feasible basic model of provincial industrial health services the first attempt in Thailand to coordinate existing institutions and services at the provincial level. Interest is already growing. In the factories studied, simply identifying the problems has brought about improvements. The foundry manager wants access to the training materials and audiovisual aids developed in the course of the project for use in teaching factory workers.

One plant supervisor wants further studies of chemical toxicity problems. "I have a right to my life", he says - *Depthnews*

CSO: 5000/4506

NORTHEAST FOREST DESTRUCTION CONTINUES DESPITE MEASURES

Bangkok BANGKOK POST in English 9 Nov 81 p 4

[Article by Chatchai Yenbamroong: "Dilemma of Safeguarding Our Forest Reserves"]

[Text]

THE recent announcement by the Ministry of Agriculture and Cooperatives to involve the military in the suppression of log-poaching has only pointed out that the past efforts to salvage the country's vanishing forests have been futile.

The reasons given by the ministry for its action were simple and plausible enough.

The Royal Forestry Department, which has been in charge of protecting our forests almost single-handedly, has claimed that it is incapable of handling this prodigious task due to lack of equipment and manpower.

Furthermore, forestry officials are not allowed to patrol restricted forest areas which have been ordered closed by the military for security reasons.

Since the military has the power to order the closure of forests for security reasons, it has been deemed appropriate and reasonable that it also be empowered to arrest suspects and confiscate logs to help curb illegal logging. Agriculture Minister Dr Anat Arbhahirama believes that this poses no problem because the military has both the equipment and manpower to look after the forest areas. Up to now, troops have closely cooperated with forestry officials in this respect, he added.

Disclosure

Ironically enough, shortly after the announcement was made, the Second Army Region disclosed that more than

15.5 million rai of forests in 16 provinces in the Northeast under its control have disappeared between 1973 and 1978.

The loss accounted for some 49 per cent of the forests existing before 1973.

The depletion took place despite the fact that the large forest areas in the 16 provinces have been ordered closed by the Second Army Region since 1974 when Prime Minister Prem Tinsulanonda was its commander.

The Second Army Region has closed them for the suppression of communist insurgency, and ostensibly to protect the reserve forests. The closure was designed to cut off all supply routes to the Communists.

Knowledgeable sources said this enormous loss over a short period has left the entire region with merely 15 per cent of forested areas, or even less. This can have serious repercussions on our ecological system beyond our imagination. Already the widespread illegal logging and shift farming are attributed for the abject state of forest areas not only in the Northeast but throughout the country.

The failure of the Second Army Region to check illegal logging in off-limit forest areas has been a source of rumours in which several army officers were accused of conspiring with local "influential elements" to fell trees.

Whether the rumours are true or groundless, is subject to debate.

Col Sa-ngtam Rattanasimakorn, spokesman of the Second Army Region, admitted to the *Bangkok Post* recently that forests in the Northeast have been alarmingly dwindling in the past several years.

"It is generally estimated that forests account for about 15 per cent of the entire area of the Northeast. But I think it is much less, 11 per cent is more likely.

"Whenever I fly over the region, it is such a depressing sight. Nothing much is left in the once fertile forests."

He said that the Second Army Region Commander used to be entitled to order forests closed for 180 days each time for security reasons, according to the Anti-Communist Act. But the new law gives him almost limitless power to close them for an indefinite period.

Impossible

"Although villagers are barred from cutting down trees in the closed forest areas, it is practically impossible to prevent them from doing so. In theory, only those with permits from the Second Army Region can enter and cut down trees in areas assigned to them, otherwise their safety cannot be guaranteed. But in many cases, we have found that some local influential people conspire with the Communists in cutting down trees.

"The insurgents give protection to logpoachers in exchange with money and supplies. Many defectors have confirmed this information.

"The Communists provide protection for these outlaws, although they have lost all their bases and are on the run in the Northeast. Since foreign aid is drying up, they now depend even more upon local sources, and logging is of course a lucrative business."

Asked about the charges that several army officers of the region have become extraordinarily rich

after the closure, Col Sa-ngiam said that such rumours were prevalent, but they were found to be unsubstantiated.

"I myself have had parts in approving removal of logs out of the forests. If there is any shady business going on, I should know about it."

He however conceded that "there are some unscrupulous local officials who live in extravagance. They have probably conspired with illegal log-poachers."

Commenting on the move to empower the military to arrest suspects and confiscate illegal logs in reserve forests, he said it is reasonable to do so because the Second Army Region Commander has often been accused of exceeding his authority in the past concerning the closure of reserve forests.

Col Sa-ngiam however warned that the military's main duty and forte are suppressing the Communists, and it is a difficult task to prevent shift farmers from trespassing in forest reserves.

Meanwhile Director-General of the Forestry Department Pong Sono told the *Post* in an exclusive interview last week that the depletion of forests in the Northeast has been alarming and a major concern for forestry officials for a long time.

He blamed the geographical feature of the region, rapid growth of population in the Northeast and widespread illegal logging, for forest denudation.

On the geographical aspect, he said that unlike the South and North, the Northeast consists of large plains, making it easy for settlers and shift farmers to encroach on.

As for rapid population growth, he explained that native northeasterners are not only destroying large forest

areas in the region, but are also known to be encroaching on forest reserves in several provinces in the North.

Finally, illegal logging flourish even after the Army ordered the forests closed. He noted that the closure is not "the best measure" to prevent trees from being cut down.

He added that it is sensible to transfer authority to the military. But the problem is "the soldiers have not been trained to look after the forests."

Mr Pong noted that shift farming and inefficient law enforcement remain the biggest problems facing all authorities concerned.

"We have vast power over those who do everything within the law, but can do nothing against those who illegally fell trees."

"The problem is made worse if the latter group has powerful backing."

Asked about cooperation from the Army, he said in certain areas like Nan Province, soldiers play a major role in the suppression of trespassers on forest reserves.

But in other areas, they do not cooperate so well.

The director-general agreed to closure of forests in the Northeast for security reasons, saying that "if we ourselves cannot survive, there is no need to save forests for others."

Closed

He pointed out that the Northeast has the largest forest areas closed by the Army on security grounds, while very small portion or none at all have

been closed in the North and South.

But forest areas in the South and North have dwindled relatively very little.

The "invitation to the military" may be the only viable option at present, since the officials who are supposed to safeguard our forests lack the means to carry out their duties efficiently and effectively. But isn't it about time the Government made a concerted effort to solve the problem rather than merely expressing concern about it?

Our forests can only be saved through meticulously imposed controls and the resources to ensure that they are carried through. The havoc that will be wrought by the annihilation of our forests — inevitable unless the present rate of forest destruction is halted — will affect not only us, but our future generations as well.

"Man, whether civilised or savage, is a child of nature — he is not the master of nature. He must conform his actions to certain natural laws if he is to maintain his dominance over his environment. When he tries to circumvent the laws of nature, he usually destroys the natural environment that sustains him. And when his environment deteriorates rapidly, his civilisation declines."

To work against all odds and bring forth positive changes, the essence of the above message from two of the world's leading ecologists must seep through the minds of those in the Government and all of us.

Let it be clear to all that this is not just another fear of pessimistic futurists.

PROBLEM OF ENERGY SOURCES, AIR POLLUTION IN MAJOR CITIES

Belgrade KOMUNA in Serbo-Croatian No 11, Nov 81 pp 41-47

[Article by Rade Ivancevic: "Energy Conservation Through More Efficient Heating and Environmental Protection"]

[Excerpts] We have entered yet another heating season that is full of uncertainty about sources of fuel. And at the same time a season of higher air pollution, especially in the large cities and industrial centers, because of the increased burning of coal and petroleum and its derivatives. This pollution is always in proportion to the degree of urbanization and industrialization. But epidemiological studies of the impact of polluted air on the state of health of the population which have been published here and abroad show that there is a sharp rise of illnesses of the respiratory organs, various allergic and malignant diseases, etc., in communities with higher levels of air pollution. Inner cities, where the population density and number of pollutants are greatest, are the most severely affected. However, in large part we ourselves are at fault for this situation, since the highest percentage of air pollution comes from stoves and furnaces of individual dwellings and small boiler installations.

The large-volume construction of housing since the war did not show particular concern for the heating of housing units, nor could it have, but this was left for the households themselves to work out--after occupancy. Thus everyone worked it out as best he knew and could, and the constant changes in fuel prices has also contributed greatly to the diversity of energy sources. It is no wonder, then, that only about 708,000 of the 5.93 million housing units in Yugoslavia are heated from central heating plants. By the end of this decade, however, construction of approximately 3 million more housing units is expected, and most of them should have central heating, heating, that is, from a central heating plant. Since the construction of housing units also involves demolition of existing units, this will reduce the number of those which lack this kind of heating system.

However, even after all the steps are taken, there would still remain about 1 million housing units in cities and slightly more than 3 million rural households which would be heated the same way as they are today. That would represent consumption of 27,000 megawatts, or twice as much as the total present installed capacity of Yugoslav power plants. If we add to this that our households spend all of 40 percent of total energy for heat and hot water, the full

story is told. This is inefficient, especially in the context of the energy crisis, and in the opinion of specialists the way out is to build larger facilities for heating cities and settlements with the greatest urgency or to better utilize the thermal energy used to cool industrial installations.

This is why an initiative has been taken for construction of central plants to provide heat and hot water. Experience elsewhere in the world indicate that municipal hot water and heating furnished in this way bring considerable savings to both the individual and society. Today about 4,000 megawatts are consumed in heating water in electric hot-water heaters, since it is assumed that 70 percent of city households have this device. Centralized supply of hot water now exists only in Zagreb, Ljubljana, Novi Sad and Banja Luka, and to some extent in Belgrade as well. These facts were recently set forth in a working agreement among fuel and power industry representatives in the Economic Chamber of Yugoslavia.

How To Make the Growing Energy Consumption in Cities More Efficient?

It is clear to all of us that the cities are gobbling up huge amounts of expensive energy. Almost two-thirds of total production, that is, more than one-third of this energy, is used for heating. It is no wonder, then, that since the beginning of the "oil crisis" supplying cities the energy they need, efficient use of that energy, energy conservation and replacement of increasingly expensive mazut and heating oil by other fuels have been a problem confronted and wrestled with by all countries, including our own.

However, it is a fact that we are consuming even what we do have rather inefficiently. Converted to electric power, Yugoslav households last year consumed nearly 50,000 megawatts of energy for heating, while at the same time the total installed capacity of Yugoslav power plants was 12,000 megawatts! It is no wonder, then, that we must all seriously engage in studying possibilities of introducing central heating systems that would free our settlements and cities of the numerous stoves and furnaces--from those conventional ones using coal to the electric radiators, in addition to several thousand small boiler installations heating separate stories, separate houses or building groups.

These opinions of the specialists may be a good lesson for the future. At this point and in the immediate future there will still be a difficulty in furnishing the necessary energy to cities, and cities must find alternative solutions. That is why it is worth taking a look at one of the conclusions of the 23d Assembly of the Permanent Conference of Yugoslav Cities and Opstinas, which reads:

"It is especially important that in every city and opstina energy budgets be planned and adopted in good time and in conformity with the energy budget of the province, the republic and the Federation and that the nearest sources of energy be defined and established, which would ensure reliable and lasting supply of the necessary energy to the city and settlement."

Orientation Toward Domestic Sources of Energy

Priority importance has been given to the fuel and power industry in the Social Plan of Yugoslavia's Development Over the Period 1981-1985. The production of

energy will rely to the greatest degree on domestic resources, along with substitution of domestic energy for imported energy wherever this is possible from the technical-and-economic and ecological standpoints. That is why the cities must seek their long-term solutions in the use of domestic energy resources, and those are: coal, hydropower and new renewable energy sources.

Coal is our largest energy resource, but it is mostly in the form of low-quality lignite, whose use is confined above all to the generation of electric power right at the deposit. This means that it is very important to our fuel and power industry to continue the development of the technology and processes for multiple use of lignite to produce quality types of [solid] (briquettes, semi-coke and dehydrated lignite) and gaseous (illuminating gas and SNG [substitute natural gas]) fuels. Lignite can be used in these high-quality forms in cities, whence it has been practically displaced since 1965 by cheap liquid fuels.

Solid fuel is today becoming increasingly important in cities for centralized supply of thermal energy. For ecological reasons these sources, especially installations for combined production of heat and electric power, need to be built within the greater city. That accounts for the great importance of the measure proposed in the Program of Long-Range Measures for Energy Efficiency, Substitution and Conservation, which provides that "... we should strive for stepped-up construction of coal-fired combined heat and power plants in the vicinity of major centers of consumption which will simultaneously meet needs for both heat and power."

Aside from the Yugoslav electric power industry, the Economic Chamber and others, the Permanent Conference of Yugoslav Cities and Opstinas is also committed to carrying out this measure. It is a very important fact from this standpoint that our country possesses more than 70 minor deposits of better-grade coal which are uniformly distributed in all parts of the country and can be used to furnish thermal energy to nearby cities. Self-management accords of those mines with consumers and municipal service organizations in those cities would make it possible for them to develop more rapidly and would therefore guarantee greater reliability in meeting the energy demand of those cities.

It is clear from what we have said that the cities must turn toward domestic sources of energy and invest in their development if in future they are to have cheaper and more reliable energy in sufficient amounts.

The Results of a Survey Conducted in 39 Cities

The principal concern of almost all the sizable cities in the country which have central heating systems is to find the most suitable domestic raw materials to replace expensive imported liquid fuels. This was indeed demonstrated by a survey conducted recently by SKGOJ [Permanent Conference of Yugoslav Cities and Opstinas] in which responses were obtained from 39 cities in all the republics and provinces except Montenegro.

Belgrade, for example, sees its future in terms of building a combined heat and power plant which will use lignite from the Kolubara mines, and a program to supply the city with gas is under way. However, there has been a delay because

of a lack of financing. The heating of Sarajevo with natural gas will begin this winter. A gas pipeline has been built from Obilic to Skopje, and in the medium-term period up to 1985 there are plans for storing and using coal or geothermal springs at Katlanovo for the central heating of the capital of Macedonia. Rijeka and Pula have decided to replace some petroleum with gas from the coking plant at Bakar, and Mostar has decided to obtain a supply of coal by opening a new underground mine at Bijelo Polje, whose production will begin in 3 years. The people of Mostar are looking for solutions in the use of solar energy and wood scrap and waste.

Most cities see replacement of liquid fuels by coal as their realistic future. For instance, Doboj intends to rely on the Stanari Lignite Mine. Jajce has found a similar solution, and cities in Serbia proper will be supplied from nearby mines: Kragujevac from the Kolubara mines and Resavica; Pozarevac from Kostolac and /(?) Krepoljini/; Zajecar from Lubnica, and so on. In Kosovo they see the use of lignite, introduction of gas supply and hot wastewater as solutions to their energy problems. Kosovo's capital, Pristina, expects to replace 90 percent of its present consumption of mazut and heating oil with coal gas from Obilic.

More Coal for Heating Means a Higher Level of Environmental Pollution

As the survey showed, most cities are opting for greater use of coal for heating and for generation of power. However, at the height of the heated discussions and debates about "how to replace increasingly expensive and scarce petroleum and whether to halt further construction of nuclear power plants or not" one hears warnings from eminent scientific circles that coal does not represent any lesser risk for humanity. Certain experts even foresee a catastrophe of untold proportions unless a radical reorientation of the entire energy system in the world is accomplished no later than the next 20 years.

The reason for this great concern is carbon dioxide, a gas which occurs in all combustion, even within the human and animal organism, and then accumulates in the air.

"Acid Rain" Is Traveling Over the World

After one rainstorm in Cologne umbrellas disintegrated and nylon stockings vanished. Much the same has occurred in Chicago, and even here at Bor and Kosovska Mitrovica. Scientists solved the "mystery" without difficulty: because of the high level of air pollution, drops of sulfuric acid fell instead of rain. It seems that these lethal rainstorms will be increasingly frequent. In the Ruhr green trees have been turned into gray scarecrows, and in Scandinavia lakes have been discovered where there is no life whatsoever, and the water is acidic. Acid rain has come even from as far away as West Germany. Back only some 10 years ago it was thought that automobiles were the number one polluters of the environment. Numerous studies in this decade, however, have shown that the air is more or less dirty even where there are no exhaust pipes and factory chimneys. Institutes all over the world have confirmed the supposition that huge masses of polluted air "travel" around the globe, poisoning equally the people where they are produced and also people thousands of kilometers away.

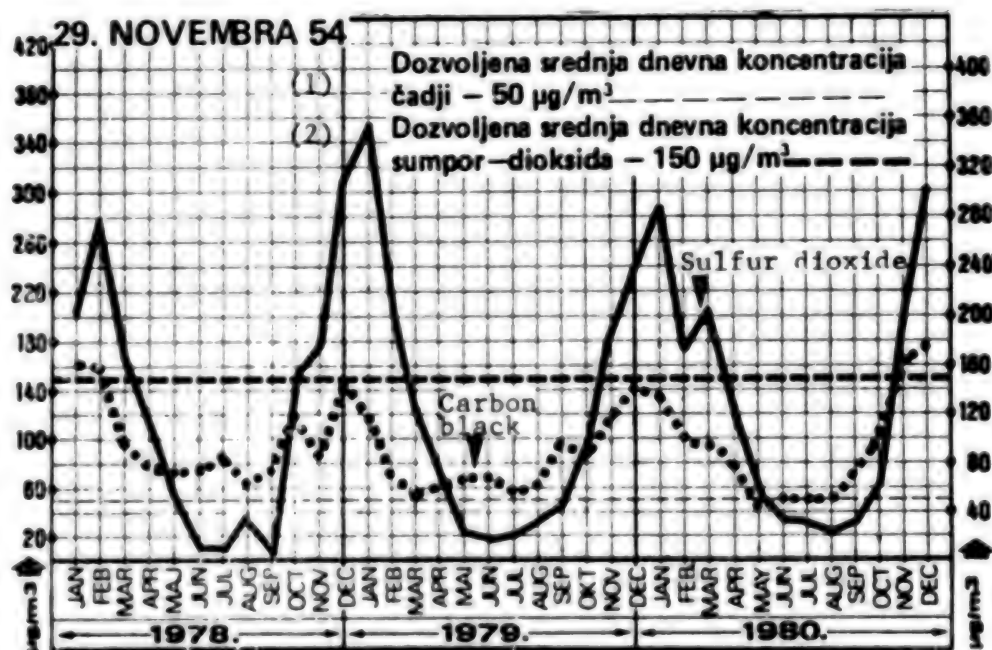
It is well known that 90 percent of all coal is burned in the most advanced regions of Europe and America, which at the same time means that the largest amount of sulfur dioxide and sulfur trioxide is contained in the air in these regions.

For example, if calm weather prevails without wind for just 5 or 6 days over the Ruhr Basin, a poisonous cloud is created which has a diameter of several hundred kilometers. Depending on the wind currents, this cloud then moves over other regions of Europe and indeed other continents. It has also been established that poisonous clouds reach Europe even from America. We have no research which could confirm this, but it is not impossible that Bled, Ohrid, Plitvice and other lakes might suffer a bad fate although there are no major polluters, that is, "producers" of smog, in the vicinity.

We Are Destroying Air Beyond All Measure

Down through history man has polluted and destroyed 2 billion hectares of land in various ways, an entire green continent. The area destroyed is equivalent to the area of all the pastures in the world today. But we need not accuse our remote ancestors for this ecological vandalism. The loss was mainly caused by people in this century. This is best seen from the amount of air we have "swallowed up" irrecoverably. From its origin to the present time humanity has destroyed about 350 billion tons of oxygen, most of it in advanced industrial processes.

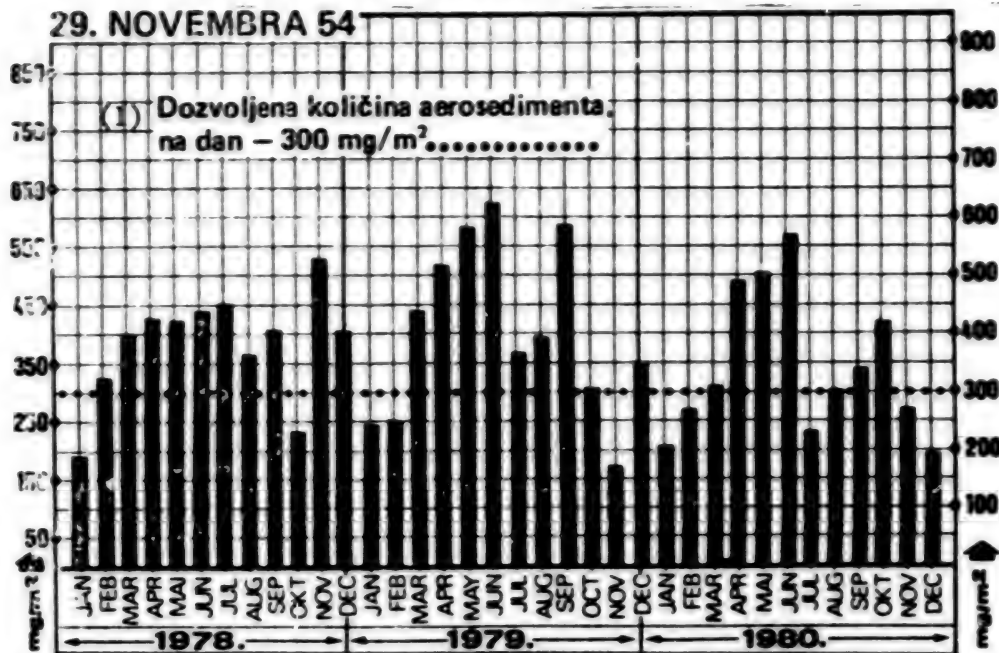
Graph 1. Average Monthly Values of SO₂ and Carbon Black (1978-1980)*



* Samples taken at the station located at 29th of November Street in Belgrade.

Key: 1. Permissible average daily concentration of carbon black ...
2. Permissible average daily concentration of sulfur dioxide ...

Graph 2. Average Daily Values of Sediments (1978-1980)*



* Samples taken at the station located at 29th of November Street in Belgrade.

Key: 1. Permissible amount of aerosediments per day ...

Only 30 billion tons of oxygen had been consumed by the beginning of our own--the industrial--century. If we recall that oxygen is a gas with a very low specific gravity, that makes the figures still more horrifying that over the last 75 years we have consumed 320 billion tons. To illustrate, one automobile in the medium class consumes more oxygen traveling 1,000 km than a human being does in a year. A large 2,400-megawatt thermal electric power plant, such as the Obrenovac TE system will soon be, irrecoverably "eats up" 1,200 tons of oxygen per hour. How much is consumed by stoves and furnaces in millions of Yugoslav dwellings and small boiler installations?

Everything we have presented indicate that we must permanent protect the basic sources of oxygen, since the need for this "life gas" is growing more and more, and the areas on which it is produced (the oceans and the forests) are being degraded and destroyed once and for all. The scientists say that there need to be seven large trees for each person.

How Polluted Are Our Cities?

Dr Milenko Krstic, professor, recently declared among other things at the conference entitled "Energy and the Environment" in Sarajevo that SO₂ and smoke have for a long time been measured by the same, that is, comparable, methods in all Yugoslav centers. However, the air quality standards adopted in 1970 have not been usable in practice. That is why in 1974 SR [Socialist Republic] Slovenia adopted its own air quality standards. After many studies and discussions

the Council for the Environment and Land Use Planning adopted in 1979 "Maximum Air Pollution Values" (GVZ), which are beginning to be used in practice in republics which have not prescribed their own standards, and in the cities of Bosnia-Herzegovina they are prescribed by a procedure established by law. Since the GVZ values are in Yugoslavia the only standards which are in conformity with the "Guideline," comparative analysis and evaluation of the level of pollution of all the republic centers can only be done on the basis of the GVZ. Working up the result of sampling data under the "Guideline" makes it possible to evaluate the level of pollution even against the new standards of the European Economic Community, and those standards have indeed been used for purposes of comparison. An evaluation according to USSR standards was not made as well, since we did not have instructions for use of those standards in practice.

The health and weather services which measure air quality in republic centers have furnished processed data, so that for the first time in Yugoslavia we have a comparative survey and evaluation of the level of pollution on the basis of identical air quality criteria.

If the situation in the most polluted portion of the respective city some 10 years ago is taken as 100, then the index number of the present level of pollution is as follows:

<u>City</u>	<u>Type of Pollution</u>	
	<u>SO₂</u>	<u>Smoke</u>
Sarajevo--center	35	25
Zagreb--center	30	40
Ljubljana--center	90	50
Belgrade--center	90	65
Skopje--center	100	100
Titograd--center	100	100

In our most polluted cities, then, there has been a significant drop in the level of pollution, one that no one dared hope for in such a short period of time. Are the earlier alarming situations a thing of the past?

What Is Expected in the Future?

Specialists interpret this drop in pollution in various ways: the rise in the standard of living of the population and the housing standard, which has brought central heating systems to the city and replacement of coal by heating oil, gas and electric power even for individual heating systems, and also the performance of various measures (high chimneys, fuels with a lower sulfur content, monitoring and better combustion, and many other measures).

If we apply the GVZ standards, which agree rather well with the EEC standards, which were adopted as the target for those countries to attain by 1993, it follows that the present level of pollution (but only in the most polluted parts of the city) needs to be reduced further by the following percentages:

<u>City</u>	<u>SO₂</u>	<u>Smoke</u>
Sarajevo--center	40	20
Zagreb--center	0	0
Ljubljana--center	45	0
Belgrade--center	10	10
Skopje--center	0	5
Titograd at the weather bureau	0	0

The situation at present, then, is most serious in Ljubljana and Sarajevo (but only until gas is brought to the old part of the city). The center of Zagreb no longer has critical levels, at least with respect to pollution from stoves and furnaces, and Belgrade, if certain efforts are made, can soon achieve this as well.

These suppositions are based, of course, on the condition that the cities will be able to adhere to the agreed policy and decisions to consume only the highest-quality fuel and will not, as is now happening, burn "whatever you can give me," including coal with a sulfur content of 3-4 percent or run-of-mine coal, heavy mazut and similar fuels which are burned and used for heating. There are cases, then, when the level of concentration of hazardous substances is often 10-15-fold greater than the maximum permissible level.

Belgrade Is a Good Illustration

Many of the measurements and studies of air pollution that have been made so far in large cities show that stoves and furnaces of individual dwellings and small boiler installations account for more than half, while industry, automobiles and miscellaneous polluters together are responsible for the rest. To be sure, this calculation applies only to the months when heating is used, but in some cities the heating season lasts even more than half a year.

In Belgrade's residential buildings there are more than 200,000 tile and other stoves burning coal or oil, as well as 1,400 boiler installations burning between 0.5 and 15 tons of fuel daily (coal or light or heavy mazut). Thus about 900,000 tons of coal and about 250,000 tons of mazut are burned in the capital every year, and the result of burning this huge amount of fuel is that Belgrade's air is among the most polluted.

According to certain estimates, about 100,000 tons of carbon black, 35,000 tons of carbon monoxide and 17,000 tons of sulfur dioxide fall on the streets of the capital in a year. To be sure, the situation has improved somewhat in recent years. Regular samplings show a change in the pattern of polluters since there has been a change in the pattern of fuel consumption, so that pollution has stayed at the level of the previous years, though the number of polluters has increased. The municipal assembly has insisted on enforcement of the Order on Sulfur Content in Coal and Mazut, and it has in large part succeeded: the permissible amount is 1 percent of combustible sulfur in coke and coal, and 2 percent of combustible sulfur in mazut. Only one-third has a higher sulfur content than 1 percent, and this coal is consumed away from the central portion of the city, mainly in boiler installations of industrial plants. However, the

situation has changed essentially during the last and the present heating seasons, above all because of the shortage of quality fuels (only one-fourth have about 1-percent sulfur).

The results of studies of the level of air pollution in Belgrade, registered between 1975 and 1980 at 10 sampling stations, show according to certain parameters that air pollution is lower in 1981 than in 1975. But sulfur dioxide air pollution in 1980 was higher than in 1979, and this is the consequence of the energy crisis and the impossibility of obtaining quality fuels.

Significant Results of the Campaign in Sarajevo

The trend of the air pollution situation in Sarajevo over the period 1970-1980 shows markedly great fluctuations in cycles lasting 3 years during which the level of pollution increased, though polluting was declining. In order to provide an examination of the trend of the level of air pollution, adjusted to certain average weather conditions, a survey was prepared of "sliding 3-year average values," indicators of high levels of pollution. By comparing the level of pollution with the amount of polluting, we are struck that the level of air pollution in Stari Grad Opstina is higher than in Centar Opstina, though emissions in Centar Opstina are about twofold greater.

This specific feature of Sarajevo results from the adverse conditions of Stari Grad Opstina for carrying away pollutants (orographic conditions and low chimneys). This kind of analysis of the functional relationship between emission and the level of air pollution in Sarajevo has helped to understand the impact of emission on pollution, and at the same time the preconditions were obtained for building a model for forecasting the level of pollution which can be used to project air quality in the preparation of urban plans.

Sarajevo has corrected the almost catastrophic levels of air pollution with smoke and sulfur dioxide of 10-15 years ago, and is now solving this problem to a satisfactory degree. In the course of 13 years of intensive effort the emission of carbon black and dust (smoke) has dropped from 4,007 tons to 970 tons per year and that of sulfur dioxide from 8,000 to about 4,000 tons a year. These results were achieved mostly without sizable investments, by performing numerous "small-scale" measures such as improving combustion in stoves, increasing the use of liquid fuels and electric radiators, use of fuel with lower sulfur content, improvement of the technical condition of stoves and furnaces, partial integration of boiler installations, etc. Considerable economies were also achieved through better combustion, as follows: as much as 30 percent for manually stoked coal stoves and furnaces. The monitoring of furnaces using liquid fuels improved combustion economy, which brought an annual saving of 4,400 tons. Since installation of a gas system in the city was adopted as the overall solution, partial investments in existing boiler installations were avoided.

We should emphasize that the 1972 Order on Air Purity prescribed only those measures which had previously been established as worthwhile, technically feasible and economically acceptable on the basis of scientific research and an actual check. Some 30 such measures were prescribed. An inspector was appointed specifically for air purity; this position has been in existence since 1972, and

the Specialized Environmental Protection Service has been organized in the municipal assembly. On the basis of the experience gained, that order was updated in 1975 and then in 1980. The Institute for Process Engineering, Power Engineering and Environmental Technology of the School of Mechanical Engineering in Sarajevo bore the principal responsibility in drafting the orders.

Difficult Winter Days in Ljubljana

Every year Ljubljana has several difficult days in late December. That is when several conditions come about that help to make the smog over this city exceptionally dense. Many steps have been taken to monitor and announce every major pollution incident, since the weather conditions over this city are exceptionally favorable for creation of smog. A list of all polluters was drawn up, and it was established that households were responsible for 50 percent of the pollution, transportation for 35 percent and industry for 15 percent. A number of measures were then immediately proposed and carried out to change the quality of fuel and the pattern of combustion and to eliminate shortcomings in boiler installations. At the same time the first unified system in Yugoslavia was set up for announcing high levels of air pollution and instituting alerts. The following limits were set: a sulfur dioxide concentration of 0.3 mg is regarded as "normal," and above that level the air is sampled more frequently. The first-level alert requires a concentration of 1.2 mg of sulfur dioxide, provided this concentration is found in samplings taken every half hour for 4 hours continuously. There is one other condition, and that is that the weather situation will not improve in the foreseeable future. Then a report is made to the executive council of the municipal assembly, to hospitals, the news media, etc., and the first-level alert is instituted. For the second-level alert the concentration must exceed 2 mg, and for the third alert 3 mg of SO₂ per cubic meter, along with the aggravating weather conditions mentioned. Similar measures have also been taken in other Slovenian cities where high air pollution has been detected.

There is a similar system operating in Zagreb as well. When a sizable concentration of harmful substances is found in the air and represents an immediate health hazard, a state of emergency is declared in the city: 1) pollution alert, 2) pollution threat and 3) pollution emergency.

In a pollution alert instructions are issued to the public on actions to be taken in the threatened areas, especially concerning children and the elderly, and recommendations are also made to large consumers to reduce the use of fuel containing more than 1-percent sulfur. At the second level production is cut back at industrial sources of pollution, especially boiler plants, and when an emergency is declared, motor vehicles are brought to a stop, except for public transportation and other public services, and the public is warned to evacuate to purer zones if necessary. Air quality in Zagreb is monitored daily at permanent sampling stations and with a special laboratory vehicle which can instantaneously ascertain the type and level of air pollution.

The Real Solutions Lie in Central Heating

The survey of the Permanent Conference of Cities and Opstinas showed that the way out of the fuel shortage and ever greater environmental pollution should be sought in central heating systems and introduction of gas service. While developing its municipal gas service system, Ljubljana at the same time sought an opportunity for future use of heat from the nuclear power plant at Krsko. At Jesenice they cut back on consumption of heating oil through coal substitution last year, and they are now drafting a program on greater use of heat from the steel mill to heat the city. Heat lines from thermal electric power plants near the city will make it possible for Trbovlje to do away with its last heating plant fired with liquid fuel in 1983. In Velenje a plan is being prepared for opening the city's own mine and for construction of a central heating plant.

As part of fulfillment of the Environmental Protection Project, most of the boiler installations in Sarajevo have begun to use gas. Belgrade's situation is unfortunately different, since, introduction of central heating having been postponed, the polluted air can be removed from the balance only by installing filters on the largest boiler installations, and that requires a great deal of money. Part of Kragujevac is connected through the Crvena Zastava [Motor Vehicle Plant] heat and power plant, and in Bor preparations are being made to obtain very cheap heat from the Sulfuric Acid Plant by a process which is very simple: heated water (up to 70° C) which previously cooled the equipment in the factory is being returned to the thermal electric power plant, converted to steam and sent out for residential heating. The Swedes and citizens of certain other countries do their heating in a similar way.

There is one other important fact we should emphasize. Using central heating instead of the present system of small individual or building-cluster boiler installations would bring an annual economy of about 3 billion tons of standard coal (caloric value 7,000 calories, that is, the best coal). The savings, that is, would be huge. Specialists have also computed that this would mean a saving of housing space, since it would no longer be necessary to build separate rooms to house the boiler installations and fuel storage areas. This alone would mean a saving of about 900,000 square meters. When we realize that the cost per square meter of dwelling space is 30,000 dinars, no special emphasis is needed as to what that kind of saving would mean.

7045

CSO: 5000/3006

GUATEMALA

LAKE PETEN ITZA POLLUTION CAUSES INCREASE IN DISEASES

Guatemala PRENSA LIBRE in Spanish 13 Dec 81 p 8

[Text] Flores, Peten--The rising of Lake Peten Itza has had repercussions on health. The incidence of hepatitis, amebiasis, and diarrheal diseases has increased from 1979 to 1981 as a result of pollution from the lake.

The above was reported by Dr Victor Calderon, regional health chief, who also said that the index of this category of diseases is rising and affects children in particular.

The doctor pointed out that, depending on 1982 statistics, a campaign will be undertaken in this central area in order to prevent these persistent diseases, but that there is no reason for alarm, since they are being controlled by the health authorities.

Dr Calderon said that vivax and falciparum have also been on the increase and, in order to check their incidence, the health ministry will clear out land in residential areas this coming year.

The doctor explained that, in 1980, 741 cases of falciparum were recorded, and in 1981, that is, so far this year, 568 cases of falciparum were reported.

Dr Calderon specified that the Ministry of Health has made preparations to carry out a campaign for the purpose of preventing the above-mentioned diseases and also others that have been recorded in the central area of Peten as a result of pollution from Lake Peten Itza.

8255

CSO: 5000/2040

CENTRAL PROVINCES AFFECTED BY HEAVY RAINS, WINDS

Salisbury THE HERALD in English 28 Dec 81 p 1

[Text]

SERIOUS damage has been done in central Mozambique by Cyclone Benedicte, the Mozambican news agency, AIM, reported here yesterday. For the past four days the provinces of Manica, Sofala, Tete and Zambezia have been affected by torrential rains and winds of up to 80 km/h. At least one person has died in the storms.

Cyclone Benedicte was first noticed north-east of Madagascar on December 18. It passed over the northern tip of Madagascar in the next two days, swept in over the Mozambique Channel, and hit the mainland last Wednesday. The storm centre was located on Saturday roughly on the boundary line between the provinces of Manica and Sofala.

In Mozambique's second largest city, Beira, raging winds tore down posts carrying electrical wires on Friday. Ziana reports. One person was killed by a falling post, and two others were seriously injured. Much of Quelimane and other parts of the country were severed.

Due to the bad weather, LAM (Mozambique Airlines) suspended flights to Quelimane. These were expected to resume yesterday afternoon.

The cyclone is now believed to be dying out, and the Meteorological Centre at Maputo Airport expects the weather in

Beira was without electricity for six hours on Friday.

The storms caused serious flooding in Quelimane, capital of Zambezia Province. In the city suburbs water was up to 1 m deep. Telephone links between

central Mozambique to improve.

● A Herald Correspondent in Bulawayo reports that a rainstorm with gale force winds struck Kezi on Christmas Day and left a trail of damage and at least one person in hospital.

The storm struck at about 8.30 pm as revellers at a Christmas party in a village outside Kezi Police Camp were singing and dancing.

People were forced to take refuge as rain and winds swept the area. At another village, Mrs Major Lukwakwa Ndlovu and her young niece were preparing to go to bed when the roof of the house was ripped off and the walls collapsed.

Mrs Ndlovu was taken to hospital with neck and chest injuries, but the child escaped unhurt.

However, the most serious damage was at Mr Taffy Moyo's village about 3 km away on the Kezi-Donkwedonkwe road, where a modern \$25 000 house was reduced to ruins, as its iron sheet roof was ripped off and hurled at least 300 m.

Two other nearby villages suffered minor damage as iron sheets were flung against thatched roof houses, slashing open gaping holes. Several huts were flooded following the damage.

BRIEFS

EUCALYPTUS REFORESTATION--About 530,000 eucalyptus trees are being transplanted from nurseries to their permanent location in an area located between "mile 8" in Dondo and Savane, in the district of Cheringoma, province of Sofala. This is the continuation of project FO-4, aimed exclusively at the production of wood, coal and construction materials. The trees belong to a rapid-growth variety. The project FO-4 will be extended to an area estimated at 25,000 hectares until the end of the present decade. It is financed by the Nordic countries through the MONAP [Mozambique-Nordic Countries Aid Program]. [Text] [Maputo NOTICIAS in Portuguese 26 Dec 81 p 3]

NAMPULA REFORESTATION--Beginning in December and until March 1982 500 hectares will be planted with eucalyptus trees in the Novas Chaves locality, in the district of Nampula. A similar project was carried out last year over a 106-hectare area. According to information obtained by our reporter from the forestry expert of the Ministry of Agriculture, Manuel Salvado Lopes, these trees, which reach great height and grow very rapidly, will furnish wood, coal and housing construction materials within a few years. The project was started in Novas Chaves and will be gradually extended. It is being carried out within the framework of project FO-5 and financed by the MONAP [Mozambique-Nordic Countries Aid Program] in the amount of 1 million dollars (about 35,000 contos). [Excerpts] [Beira DIARIO DE MOCAMBIQUE in Portuguese 24 Nov 81 p 3]

CSO: 5000/5638

KANO STATE SAID HIT BY SERIOUS DROUGHT

Kaduna NEW NIGERIAN in English 2 Dec 81 pp 1, 21

[Article by Abdulhamid Babatunde]

[Excerpts] **KANO State has again been hit by drought and the effects have been described from official circle as 'very serious'**

This is the second time within nine years that drought of such magnitude has affected the state.

In 1973, the scourge devastated several farmlands and livestock in the state in which several million Naira worth of crops and livestock were destroyed.

Confirming the effect of the new outbreak to the New Nigerian in Kano yesterday, the state Commissioner for Agriculture, Alhaji Shehu Mohammed Shanono, described its effects as 'very serious'.

The commissioner explained that the drought was caused by the sudden rain stoppage adding that this year's rains [ceased] in early September instead of October as usual.

He said the situation had forced farmers in the affected areas to abandon their farms and migrate to other areas in search of job or for better farmland.

Alhaji Shanono added that the affected parts of the state may not get up to 50 per cent of the normal agricultural yields for the

previous years and as a result, both the state government and the Federal Ministry of Agriculture had been alerted on the grave situation.

The commissioner pointed out that the state government and his ministry in particular were worried about the position of things and the state Ministry of Finance had been instructed to release funds for the purchase of grains to supplement those being stored for distribution in the affected areas.

Alhaji Shanono revealed that the Federal Ministry of Agriculture was also willing to assist the state in its bid to purchase large quantities of grains because those locally available would [not] be sufficient.

He added that although his ministry was still making a detailed assessment of the problem, it had already started thinking of reducing dependence on the rains for agricultural production in the state through a large-scale irrigation scheme.

Some dams in the state he said, would be utilised for irrigation purposes immediately after harvest this year so as to keep farmers busy all the year round and increase production when the rains were favourable.

The most affected areas are Hadejia, Birniwa, Kadin Hausa, Gumel, Kangama Garki, Gwarzo, Maigatari, Dawakin Tofa, Bichi, Minjibir and Kazaure while Gezawa and Ringim were only partially affected, he disclosed.

Before the scourge report yesterday. Our Staff Correspondent had earlier conducted an investigation on crop prospects this year in Kano State and filed in this report:

The prospects of crop harvest in Kano State this year is very gloomy.

According to the state's Chief Agricultural Officer, Alhaji Wada Ibrahim Dederi, crop harvest would fall below half of what was obtained last year.

A hectare of land which under normal condition would produce about 12 tonnes of grains would not yield more than four tonnes this year, he declared.

Worst affected areas, he said,

were Kano municipality, Dambatta, Gumel, Garki, Ringim, Maigatari, Birniwa and Kazaure local government areas where crops particularly guinea corn and millet were affected by what he described as 'an unusual outbreak of insects.'

Alhaji Wada said that only 180.64 millimetre rain was recorded in the state during the planting season this year compared with the 260.12 millimetres obtained last year.

He said the pattern of rainfall distribution was very poor adding that plants at times withered before getting rainfall as intervals of between 10 and 15 days was experienced between each rainfall.

CSO: 5000/5634

BRIEFS

OIL SPILLAGE VICTIMS UNPAID--Rivers State Governor, Chief Melford Okilo, has said that the Federal Government has not paid any compensation to the victims of the 1979 Akassa oil spillage in the state. The governor told members of the Board of Directors of the Nigerian National Petroleum Corporation (NNPC) when he received them in his office, that it was a matter of regret that the Federal Government was neglecting the people of Rivers State. Chief Okilo said that while Lagos sent materials and funds with despatch to victims of natural disasters in other states, his state was left un-attended to. He said that he was not happy that the people on whose land the nation earns its revenue are often treated with contempt and forced to beg. [Excerpt] [Kaduna NEW NIGERIAN in English 25 Nov 81 p 11]

CSO: 5000/5633

AGENCY WANTS TO LIMIT BENOMYL IN CONTROL SUBSTANCES

Helsinki HELSINGIN SANOMAT in Finnish 24 Nov 81 p 11

[Text] "There is far too much benomyl in food. The amounts of the dangerous preservative will be cut down to one-tenth. The National Board of Trade and Consumer Interests approaches very seriously the information that benomyl, which is commonly used as a preservative and an additive, causes damage to the testes, malformations and death of fetuses. It has no doubt also been proved that one of its metabolites is carcinogenic," says inspector Vesa Tuomala of the National Board of Trade and Consumer Interests.

According to the National Board of Trade and Consumer Interests this toxicity of benomyl is reported by the National Board of Health based on a report prepared by its experts in toxicity matters.

The National Board of Health states in its report that food must not be sold to a consumer if it contains more than 0.2 mg/kg benomyl. Until now the largest allowed residue has been 2.0 mg/kg. The new limit will be required beginning 1 April 1982.

The National Board of Health further wishes to remove benomyl from its lists of substances. That way the substance could no longer be used as a preservative for fruit that is imported.

According to the National Board of Trade and Consumer Interests the proposals made by the toxicity experts will probably be accepted. Benomyl will be considered shortly when the residue limits will be redetermined. It is also fairly certain that it will be removed from the lists of additives.

"When the use of benomyl as an additive becomes prohibited, the resulting problems will especially affect the importers of apples, pears and plums. A substance, whose toxicity has been classified as being of a different nature does not cause much difficulties for the growers," says Tuomala. The grower does not need a permit to buy this poison. The amounts of the substance used are the responsibility of the grower.

Tuomala points out the fact that for example those who eat citrus fruits need not be afraid because usually, when the fruits are peeled, the danger decreases.

The Use of Benomyl Already Restricted

In Finland a product called Benlante contains benomyl. According to the current requirements it can be used for the prevention of exotic plant diseases. The use of Benlante is restricted so that it cannot be used for lettuce of above-ground growth of other leaf vegetables and cultivated radishes. Currant and gooseberry bushes also cannot be treated between blossoming and harvesting.

A safety period of 7 days has been designated for Benlante.

In Norway 1,610 kg benomyl were used in 1979. The corresponding amount in Finland was 2,144 kg. In 1980 the amount used in Finland was 2,582 kg.

In Sweden the amount of benomyl used in 1979 was 20,700 kg. In Sweden five different products were used.

The Nordic authorities for the use of preservatives agreed a year ago to clarify the harmful effects of some substances. Because of the shortage in resources the work was divided up between the different countries. The Finnish group began work on benomyl. The toxicologists who belong to the work group of the National Board of Health are among our countries' top experts in their field. They have not done any research of their own, but have gone through the abundance of international studies in the field.

Benomyl became internationally used during the 1960's and 1970's. Since its immediate toxicity is low, it was considered as a fairly harmless preservative. Toward the end of the last decade there was a growing amount of information about the harmful effects of the substance both on humans and on nature. In the United States a preliminary warning had already been given in 1977. A couple of years later directions were given for the use of the substance and children and pregnant women were advised against handling the material.

In the Federal Republic of Germany the local health ministry presented some remarkable restrictions last year regarding the use of benomyl. Companies that produce benomyl have been asked to complete the toxicological index of the substance. In Finland the investigators mostly used material that the manufacturer had made available and had not yet published as well as information that had been received from the United States and the Federal Republic of Germany.

During the spring of 1981 the National Board of Trade and Consumer Interests clarified how large the amounts of preservatives were, what the Finnish people on the average had ingested with their food. The results of this study show that among others the benomyl residues have increased in the past 5 years. The average benomyl intake during 1977-80 from domestic fruits and vegetables was about 1.1 mg per capita, per year and from imported fruits about 8.2 mg, and the fraction from imported apples and citrus fruits was about 0.2 mg per capita, per year. The effects of benomyl and its metabolites have been studied through experiments with animals.

Benomyl's immediate toxic effect on rodents was low according to the experiments, but it was high on animals living in water. When administered for a long period of time it has been found that the substance is toxic, especially for the testes.

The 2-year long feeding experiment with rats resulted in changes in the testes in 42 and 22 percent of the animals when two control groups were used. The doses of toxin were 0 - 10,000 mg per kg fodder.

Experiments made on dogs have shown both damages to the testes as well as liver cirrhosis, when the substance has been fed to the dogs in very large amounts, about 90 mg per day. Damages to the testes were observed also in dogs that had only eaten small doses of the substance.

9662

CSO: 5000/2030

BRIEFS

TOUGHER SEA-POLLUTION PENALTIES URGED--The penalties stipulated for the prevention of pollution from boats and ships are, according to other national laws, too mild. This is the opinion of the Finnish delegation that is participating at the general meeting in London of the Intergovernmental, Maritime Consultative Organization, IMCO. Director Heikki Mutttilainen from the National Board of Navigation says that IMCO should propose to the governments that tougher penalties be urged. The Finnish delegation further proposes that the government should without delay take the necessary actions to change the law. Chairman of the Finnish delegation is general director of the National Board of Navigation, Jan-Erik Jansson. IMCO's general meeting ends on 20 November. [Text] [Helsinki HELSINGIN SANOMAT in Finnish 10 Nov 81 p 8] 9662

CSO: 5000/2030

DISSATISFACTION VOICED OVER RHINE DEPOLLUTION MEASURES

Paris L'USINE NOUVELLE in French 26 Nov 81 p 77

[Article by Francois Perrier: "Depollution of the Rhine: A Fr 250 Million Contract"]

[Text] Injection, then saltworks: The compromise reached on the depollution of the Rhine satisfies neither the Alsatians nor the people of Lorraine yet doubles the price of the contract.

From Fr 130 to 150 million to build a 300,000 to 500,000 ton saltworks, Fr 120 million for injection equipment. The compromise reached on the treatment of wastes from the State Potassium Mines of Alsace (SPMA) doubles the price of the equipment contract which should be concluded in late 1982.

Technically the matter is settled: "The 1600-meter depth of the sedimentary formations forms a complete impervious roof," the latest report says. The details it gives on the necessary precautions constitute the beginnings of regular specifications: two oil wells previously drilled on the land concerned must be inspected. The pipes will undergo factory testing, and the soldering will be checked by radiography. Testing will be done by analyzing water from different piezometers at intervals along the piping.

Under these circumstances, why launch this new appraisal mission? The point is that the compromise, as planned, is unsatisfactory to nearly everyone:

The Alsatians, to whom the injection of brine into the subsoil seems an exorbitant price compared to the 25 jobs created by the saltworks;

The people of Lorraine who happen to be worried about this new competitor (it will sell 100,000 tons on the national market in 3 years), while their plants are operating at only two-thirds of capacity (900,000 tons);

Even the Dutch: after all, the agreement finally reached concerns only 15 percent of SPMA wastes. And this salt also happens to compete with Akzo salt.

The international experts have been called in for the principle purpose of calming public sentiment before this mandatory parliamentary election.

Initial reactions make it possible to predict a lively debate again when the agreement reaches the assemblies' agenda in autumn 1982. Now, the previous government had to give up on the ratification of the Bonn agreement.

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DANGEROUS POLLUTION LEVELS REACHED IN ATHENS

Athens AKROPOLIS in Greek 21 Nov 81 p 10

[Excerpt] Pollution has become a permanent feature--in fact, above the alert levels for the entire 24-hour period--in the atmosphere above Athens, Piraeus and Rendi. This situation directly threatens the health of the public. This disquieting conclusion results from the following two factors:

--For the first time on Thursday, the 24-hour smoke levels surpassed the alert level of three photometric units [p.u.]. This fact means a permanent condition of pollution in the region resulting from gas fumes and industrial smoke.

--For the first time in the past 2 years, the smoke level reached 8 p.u., that is a level almost triple that of the alert level.

Pollution Yesterday

The ministry of social services announced yesterday that the 3-hour smoke levels were as follows: on Patisia Street 2.29 p.u. (between 0-3 am), 1.27 p.u. (between 3-6 am), and 4.55 p.u. (between 6-9 am). On Aristotelous Street 3.15 p.u. (between 0-3 am), 3.42 p.u. (between 3-6 am), and 5.68 p.u. (between 6-9 am). In Piraeus during the corresponding periods of time 2.41 p.u., 1.51 p.u. and 5.51. In Rendi during the corresponding periods of time 1.5 p.u., 1.71 p.u., and 5.18 p.u.

The nitrogen dioxide level was also found to be above the safety level, with a greater level of 262 milligrams per cubic meter on Patisia Street between 8-9 am. The most disquieting factor, however, which the authorities must tackle is the 24-hour smoke level of Thursday which was 3.3 p.u. on Aristotelous Street and 3.13 p.u. on Patisia Street. These levels should have immediately set in motion all the alert systems (drop in industrial output, stopping of traffic, extinguishing of all open hearth fires, flexible work schedules, closing of schools, etc.).

Also especially high on Thursday was the 24-hour smoke levels in Piraeus (1.74 p.u.) and Rendi (2.54 p.u.), as well as the 24-hour levels of sulphur dioxide on Patisis Street, in YKY [expansion unknown] describes even greater levels and advises that it is one of the three times in 2 1/2 years of measurements by the center that the "cloud" has reached such high levels.

The smoke levels announced by the PAKOE are as follows: 8 p.u. in Rendi, 6.9 p.u. in Piraeus and 6.6 p.u. in Athens. The nitrogen dioxide level according to the center was 430 milligrams per cubic meter in Rendi, 395 in Piraeus and 369 in Athens.

We point out, nevertheless, that the PAKOE does not mention either the type nor the length of time of the measurements which it carried out.

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BRIEFS

TAR PLANT POLLUTION IN ARKADIA—In a memorandum addressed to the government, government opposition parties and other groups, the president of the Makris, Arkadia, municipality, the Makris Agricultural Association, the chairman of the Agricultural Cooperative and inhabitants of the region have complained about the great dangers for the health of the inhabitants as well as for the orchard nurseries and grazing lands of the Makris, Arkadia, region from the operation of a tar plant. The memorandum mentions that many petitions had been made to competent authorities regarding the above-mentioned problem, but no action had ever been taken to suspend operation of the plant's tar production. [Text] [Athens RIZOSPASTIS in Greek 17 Nov 81 p 9] 5671

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